

2015 Residential Wood Heater NSPS - Summary

On February 3, 2015, the Environmental Protection Agency (EPA) signed updated New Source Performance Standards (NSPS) for residential wood heaters. The updates are the first substantive changes to the clean air standards for residential wood heaters since 1988, and reflect improved wood heater technology since that time. The standards apply to newly manufactured heaters, not wood heaters currently in use. The following brief summary describes some of the key differences between the 1988 regulations and the 2015 NSPS.

The major changes involve stronger limits on particulate matter (PM) emissions, as described in more detail in the tables below, which are phased-in over a five-year period, on a broader range of heaters. Similar to the 1988 regulations, manufacturers are required to participate in a certification program that tests a representative heater per model line. Under the 2015 NSPS, wholesalers and retailers are also subject to limits on the sale of non-certified heaters. These vendors may sell existing inventory of woodstoves meeting EPA's 1988 standards and hydronic heaters through December 31, 2015.

EPA also revised the enforcement and audit provisions, improved the previous test methods, and added new test methods. Importantly, the 2015 NSPS allows a cord wood alternative compliance option for room heaters and hydronic heaters, subject to EPA approval.

Room Heaters (revised 40 CFR 60, subpart AAA)

The 2015 NSPS strengthens the particulate matter emission limits for new adjustable-rate woodstoves, which were included in the 1988 regulations under 40 CFR part 60, subpart AAA. It also broadens the applicability of subpart AAA by including previously exempt pellet stoves and unregulated single burn-rate stoves. The standards still do not apply to fireplaces, pizza ovens, fire pits, barbecues, or chimineas.

Emissions Limits for New Woodstoves and Pellet Stoves		
Step	PM Limit	Compliance Deadline
Current (Phase 2)	4.1 g/hr (catalytic)	Current Standards
	7.5 g/hr (noncatalytic)	
Step 1	4.5 g/hr	60 days after the final rule is published
Step 2	2.0 g/hr (crib)	Five years after the effective date of the final rule (in 2020)
	2.5 g/hr (cord)	

Central Heaters (new 40 CFR 60, subpart QQQQ)

The 2015 NSPS adds standards of performance for new hydronic heaters and forced-air furnaces, now regulated under 40 CFR part 60, subpart QQQQ.

Emissions Limits for New Hydronic Heaters		
Step	PM Limit	Compliance Deadline
Current (voluntary)	0.32 lb/MMBtu	"Phase 2 qualified" program is used in some states
	18.0 g/hr max test run	

Step 1	0.32 lb/MMBtu	60 days after the final rule is published
	18.0 g/hr max test run	
Step 2	0.10 lb/MMBtu (crib)	Five years after the effective date of the final rule (in 2020)
	0.15 lb/MMBtu (cord)	

Compliance testing of forced-air furnaces requires that emissions be tested using cordwood. Forced-air furnaces are not included in the additional sell-through time allowed for room heaters and hydronic heaters.

Emissions Limits for Forced-Air Furnaces		
Step	PM Limit	Compliance Deadline
Work Practice Standards	Implementation of operational/work practice standards	60 days after the final rule is published
Step 1	0.93 lb/MMBtu	Small furnaces (< 65,000 BTU/hr): one year after final rule
		Large furnaces: two years after final rule
Step 2	0.15 lb/MMBtu	Five years after the effective date of the final rule (in 2020)

Comparison of Wood Stove Costs Pre and Post-NSPS (product and installation)

According to EPA's Burn Wise program the cost of a revised NSPS compliant wood stove ranges from **\$750 to \$3500** with installation costs ranging from **\$600 to \$1200**. The Regulatory Impact Analysis conducted for the revised NSPS reports pre-revised NSPS wood stove costs ranging from **\$200 to \$2800** with an installation cost of approximately **\$500** (2008 values). The HPBA reports the cost of pre-NSPS wood stoves ranging from **\$3000 to \$4200**, including installation costs.

Can Existing Woodstoves Meet NSPS Emission Limits

According to EPA's Burn Wise program approximately **90%** of currently manufactured wood stoves meet EPA Step 1 emission limits (4.5 g/hr) and **18% currently meet Step 2** emission limits (2.0 g/hr, alternative 2.5). The effective date for Step 1 limits is 60 days after final rule is published in FR (pending) and Step 2 limits become effective 5 years from NSPS effective date.